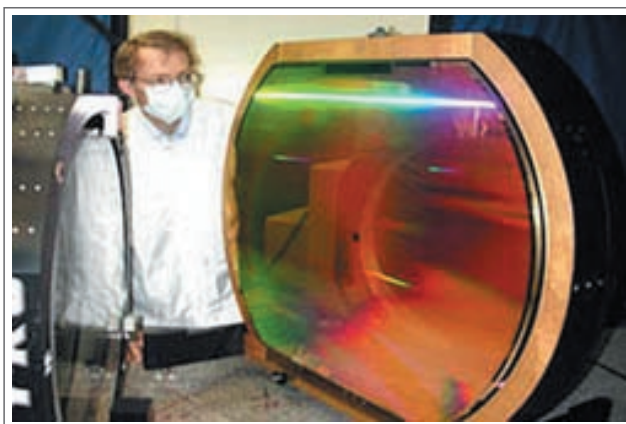


Advanced Optical Components & Technology

Gratings



Large-Aperture, Gold-Coated Plane Gratings

AOCT designs and manufactures custom, **metal-coated plane gratings** of up to one meter in diameter, optimized for user wavelength and incidence angles. AOCT's 94-cm-diameter, 1480 l/mm plane grating is used for pulse compression in Rutherford Appleton Laboratory's Vulcan Petawatt Facility.

These gold-overcoated, resist gratings on 500-pound, BK7 substrates are optimized for a diffraction efficiency of greater than 90 percent at 1,053 nm, TM polarization, Littrow angle, and are manufactured entirely at LLNL. The pulse stretcher grating, consisting of two in-phase gratings separated by a high-reflector on the same optical surface, allows for an all-reflective, easy-to-align, reduced-aberration pulse stretcher for ultrashort-pulse laser applications; it was patented by LLNL in 1999.

